

SECTION 07720
ROOF ACCESSORIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Roof curbs.
 - 2. Equipment supports.
 - 3. Roof hatch.
 - 4. Equipment roof hatch
- B. Related Sections:
 - 1. Section 05500, "Metal Fabrications" for ladders and miscellaneous metal framing and supports.
 - 2. Division 6 Section "Miscellaneous Carpentry" for wood nailers.
 - 3. Sections 07511, "Built up Asphalt Roofing" for roofing accessories included as part of roofing Work.
 - 4. Sections 07512, "Protected Built up Asphalt Roofing" for roofing accessories included as part of roofing Work.
 - 5. Division 7 Section "Sheet Metal Flashing and Trim" for shop- and field-fabricated metal flashing and counterflashing and miscellaneous sheet metal trim and accessories.

1.3 SUBMITTALS

- A. Product Data: For each type of product indicated. Include construction details, materials, dimensions of individual components and profiles, and finishes.
- B. Shop Drawings: Show fabrication and installation details. Indicate dimensions, weights, loadings, required clearances, method of field assembly, and components. Include plans, elevations, sections, details, and attachments to other Work.

1.4 QUALITY ASSURANCE

- A. Standards: Comply with the following:
 - 1. SMACNA's "Architectural Sheet Metal Manual" details for fabrication of units, including flanges and cap flashing to coordinate with type of roofing indicated.
 - 2. NRCA's "Roofing and Waterproofing Manual" details for installing units.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Roof Curbs and Equipment Supports:
 - a. Custom Curb, Inc.
 - b. Pate Co.(The).
 - c. ThyCurb, Inc.
 - 2. Roof Hatch and: Subject to compliance with requirements, provide products by one of the following:
 - a. Bilco Company.

- b. Milcor, Inc.
- c. Wasco Products, Inc.

2.2 MATERIALS, GENERAL

- A. Galvanized Steel Sheet: ASTM A 653/A 653M with G90 coating designation; commercial quality, unless otherwise indicated.
 - 1. Structural Quality: Grade 40, where indicated or as required for strength.
- B. Aluminum Sheet: ASTM B 209 for alclad alloy 3005H25 or alloy and temper required to suit forming operations, with mill finish, unless otherwise indicated.
- C. Insulation: Manufacturer's standard rigid or semirigid glass-fiber board of thickness indicated.
- D. Fasteners: Same metal as metals being fastened, or nonmagnetic stainless steel or other noncorrosive metal as recommended by manufacturer. Match finish of exposed fasteners with finish of material being fastened.
 - 1. Where removing exterior exposed fasteners affords access to building, provide nonremovable fastener heads.
- E. Gaskets: Manufacturer's standard tubular or fingered design of neoprene, EPDM, or PVC; or flat design of foam rubber, sponge neoprene, or cork.
- F. Mastic Sealant: Polyisobutylene; nonhardening, nonskinning, nondrying, nonmigrating sealant.
- G. Elastomeric Sealant: Silicone type recommended by unit manufacturer that is compatible with joint surfaces; ASTM C 920, Type S, Grade NS, Class 25, and Uses NT, G, A, and, as applicable to joint substrates indicated, O.

2.3 ROOF CURBS

- A. Provide roof curbs capable of supporting superimposed live and dead loads, including equipment loads and other construction to be supported on roof curbs. Coordinate dimensions with rough-in information or Shop Drawings of equipment to be supported.
- B. Fabrication: Fabricate units from minimum 0.0747-inch- thick, structural-quality, hot-dip galvanized steel sheet; factory primed and prepared for painting with welded or sealed mechanical corner joints.
 - 1. Provide formed cants and base profile coordinated with roof insulation thickness.
 - 2. Fabricate units to minimum height of 8 inches, unless otherwise indicated.

2.4 EQUIPMENT SUPPORTS

- A. General: Provide equipment supports capable of supporting superimposed live and dead loads, including equipment loads and other construction to be supported. Coordinate dimensions with rough-in information or Shop Drawings of equipment to be supported.
- B. Fabrication: Fabricate units from minimum 0.0747-inch- thick, structural-quality, hot-dip galvanized steel sheet; factory primed and prepared for painting with welded or sealed mechanical corner joints.
 - 1. Fabricate units to minimum height of 8 inches, unless otherwise indicated.

2.5 ROOF HATCHES

- A. General: Fabricate units to withstand 40-lbf/sq. ft. external and 20-lbf/sq. ft. internal loading pressure. Frame with minimum 9-inch- high, integral-curb, double-wall construction with 1-1/2-inch insulation, formed cants and cap flashing (roofing counterflashing), with welded or sealed mechanical corner joints.
 - 1. Provide double-wall cover (lid) construction with 1- inch- thick insulation core.

2. Provide gasketing and equip with corrosion-resistant or hot-dip galvanized hardware including pintle hinges, hold-open devices, interior padlock hasps, and both interior and exterior latch handles.
3. Include "High Wind" modification to prevent damage to hatch.
- B. Closure: Provide sheet aluminum closure panel as shown on Drawings. Sheet aluminum shall be finished to match roof hatch.
- C. Type: Single-leaf personnel access. For either stair or ladder access; size as shown on Drawings.
 1. Material: Galvanized steel or Aluminum, sheets and extrusions.
 2. Finish: Baked enamel.
- D. Type: Double-leaf personnel and equipment access; size as shown on Drawings.
 1. Material: Galvanized steel curb and Aluminum cover.
 2. Finish: Baked enamel.
 3. Model: Provide Type D-40 manufactured by Bilco, or equivalent model by other listed manufacturers.

2.6 FINISHES, GENERAL

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

2.7 GALVANIZED STEEL SHEET FINISH

- A. Surface Preparation: Clean surfaces with nonpetroleum solvent so surfaces are free of oil and other contaminants. After cleaning, apply a conversion coating suited to the organic coating to be applied over it. Clean welds, mechanical connections, and abraded areas, and apply galvanizing repair paint specified below to comply with ASTM A 780.
 1. Galvanizing Repair Paint: High-zinc-dust-content paint for regalvanizing welds in steel, complying with SSPC-Paint 20.
- B. Factory Priming for Field-Painted Finish: Where field painting after installation is indicated, apply the air-dried primer specified below immediately after cleaning and pretreating.
 1. Shop Primer: Exterior galvanized metal primer per Division 9 Section "Painting."

2.8 ALUMINUM FINISH

- A. Baked-Enamel Finish: AA-C12C42R1x (Chemical Finish: cleaned with inhibited chemicals; Chemical Finish: acid-chromate-fluoride-phosphate conversion coating; Organic Coating: as specified below). Apply baked enamel complying with paint manufacturer's specifications for cleaning, conversion coating, and painting.
 1. Organic Coating: Thermosetting, modified-acrylic enamel primer/topcoat system complying with AAMA 603.8 except with a minimum dry film thickness of 1.5 mils, medium gloss.
 2. Color: Match Construction Manager's sample.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. General: Comply with manufacturer's written instructions. Coordinate installation of roof accessories with installation of roof deck, roof insulation, flashing, roofing membranes,

penetrations, equipment, and other construction involving roof accessories to ensure that each element of the Work performs properly and that combined elements are waterproof and weathertight. Anchor roof accessories securely to supporting structural substrates so they are capable of withstanding lateral and thermal stresses, and inward and outward loading pressures.

- B. Install roof accessory items according to construction details of NRCA's "Roofing and Waterproofing Manual," unless otherwise indicated,
- C. Separation: Separate metal from incompatible metal or corrosive substrates, including wood, by coating concealed surfaces, at locations of contact, with bituminous coating or providing other permanent separation.
- D. Flange Seals: Unless otherwise indicated, set flanges of accessory units in a thick bed of roofing cement to form a seal.
- E. Cap Flashing: Where required as component of accessory, install cap flashing to provide waterproof overlap with roofing or roof flashing (as counterflashing). Seal overlap with thick bead of mastic sealant.

3.2 CLEANING AND PROTECTION

- A. Clean exposed surfaces according to manufacturer's written instructions. Touch up damaged metal coatings.

END OF SECTION 07720